

# Transparency, Open Data and Trust in Government: Shaping the Infosphere

Kieron O'Hara

Electronics and Computer Science

University of Southampton

Highfield

Southampton SO17 1BJ

United Kingdom

kmo@ecs.soton.ac.uk

## ABSTRACT

This paper examines the ways in which using the World Wide Web to promote transparency and to disseminate open data will affect warranted and unwarranted trust in politics and within societies. It is argued that transparency and open data will be damaging for unwarranted trust, but this will open up a space for warranted trust to flourish. Three types of theory about trust and decision-making in politics are discussed: social capital theories, rational choice theories and deliberative democracy theories. Using the UK government's transparency programme in crime and criminal justice as an example, it is argued that mechanisms being pioneered to disseminate open data online, such as sites like data.gov and data.gov.uk, promote trust on each theory, although the supply of data is necessary but not sufficient. It is also necessary to consider the wider infosphere, putting deliberative processes in place to foster trust.

## Author Keywords

Transparency; trust; open data; crime data; criminal justice data, rational choice, social capital, deliberative democracy.

## ACM Classification Keywords

K.4.1. Computers and society: public policy issues.

## General Terms

Human Factors; Legal Aspects.

## INTRODUCTION

The World Wide Web has enabled one of the most revolutionary changes in the practice of politics of recent years: the development of transparency and open data. Sites such as data.gov, data.gov.uk, datos.gob.es and data.gouv.fr now routinely publish data under very liberal licences. The involvement of major figures from the Web community, such as Tim Berners-Lee and Nigel Shadbolt in the UK and

James Hendler in the US, have helped raise the likelihood that open data will be reusable and linkable, and will make an important contribution to the Linked Data Web.

However, we should not lose sight of the fact that the Web is a sociotechnical system, and that as well as improving the flow and quality of data, and pushing to ensure that representational formats meet the exacting requirements of Berners-Lee's 5\* rating system,<sup>1</sup> there are also institutional and process changes that are needed to ensure that open data gets used productively, and enhances the political experience. The aim must be to develop not just the technical infrastructure (important as that is), but also what Floridi has termed the whole *infosphere* [5], the complete information environment, of which the Web is an important but not exclusive part.

In this paper, I will consider the issue of how open data and transparency can help foster trust in politics. Trust is far from being the only driver for transparency and open data programmes, but it is an important one, with resonance in many countries that have recently experienced scandal or corruption.

As a matter of scope, I emphasise that this paper is a normative analysis, driven by theories of democracy from political philosophy, and a sociological theory of trust. The outputs of the paper are philosophical (normative arguments for transparency policies, and for the democratic legitimacy of transparency) and practical (arguments about institutional design and risk management). The paper does not contain empirical work (e.g. surveys of citizens), although this is clearly a very important aspect of establishing and retaining legitimacy of transparency in democracies, and such studies are an essential component of governments' efforts to ensure and retain public trust in transparency.

For the purposes of this short paper, I will not differentiate too much between transparency and open data, but the basic distinction is that transparency is the practice of being open

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<sup>1</sup> Set out in <http://www.w3.org/DesignIssues/LinkedData.html>.

about government processes, while open data is the practice of making data reusable by citizens and/or consumers. There is a large overlap between the two ideas, but they set different requirements. In each case the Web is a vital delivery mechanism as it has the lowest barriers to entry, and so makes data from either agenda widely available.

The structure of this paper is as follows. First, I shall set out some basic ideas about trust in politics, and show how they relate at an abstract level to transparency and open data. Next, I shall set out an example from the UK government's transparency programme, focusing on data about crime and criminal justice. The next three sections will consider how this programme measures up against three influential theories about trust in politics. A final discussion section considers lessons learned.

## KNOWLEDGE, TRUST AND TRANSPARENCY

### Trust and Trustworthiness

Trust is a manifold concept [14], and generalisations about it are fraught with risk, as it ranges from the trust that a baby has for its mother, to the trust that a thief has for the fence who handles his stolen goods. Yet trust in the political sphere does have some properties specific to its context. Political relations are public, and often marked by conflict over resource allocations. Cooperation often requires negotiation, and promises good payoffs as against risks of losses. Furthermore, many political issues impact on deep forces such as personal identity and group solidarity, and so are often not resolvable via shallow mechanisms such as game theory.

In political circumstances such as these, trust is an important risk and complexity management tool [12]. If X trusts Y to some degree, then this means that X believes, to that degree, that Y is trustworthy. All things being equal, he will be willing to take a risk of a certain level on Y's trustworthiness (i.e. Y being willing, able and motivated to behave as she claims she will). The stronger X's trust, the higher the degree, and the greater the risk he is willing to take. His trust may be supported by *institutions*, which structure Y's behaviour, provide behavioural templates and may also investigate, store or certify Y's reputation, or by *sanctions*, which increase the incentives for Y to be trustworthy to the extent that they are practicable.

If X trusts Y, he saves himself the costs of performing whatever task himself that he would like to outsource to Y; he can more easily accrue the benefits of cooperation in the absence of the costs of fraud; and he saves himself the costs of monitoring and micromanaging Y. Trust enables X to maximize the reach of his limited cognitive resources. X's lifeworld becomes less complex because he can outsource some of his interactions to Y, while he is also more confident that he is minimising risk.

Of course, we have to add the caveat that X's trust needs to be well-placed – i.e. that Y is trustworthy. If Y is not trustworthy (or worse, untrustworthy), then greater costs

and complexity will accrue for X in the long run. If X's trust is well-placed on the basis of relevant knowledge, then we can say his trust is *warranted*. If it is based on, say, a hunch, then it is unwarranted. If trust is unwarranted, that does not mean it is not well-placed, of course. Conversely, warranted trust is not always well-placed either (it merely states that it is rational to trust when trust is warranted).

The role of knowledge in trust relations is important, in that it lowers risk, uncertainty and complexity. Hence transparency, which increases (access to) knowledge, has a role to play in trust relations. To take an obvious example on which I will expand later, if Y's interests are transparent, X can make a better judgment of how well her interests align with his own. As another example, if Y's past actions are transparent, then X can make a better judgment of Y's capabilities and how disposed she is to behave as she claims she will.

### Trust in Politics

Although many have said that trust is a vital part of politics, there are conflicting theories about the role it plays. Some authors, e.g. Francis Fukuyama, [6] have erroneously argued that we need a high-trust society to be economically successful. That this is false is easily seen: what we need is a *high-trustworthiness* society in which *trust is placed accurately*.

At the other extreme, Russell Hardin has denied that it is an appropriate attitude for citizens to take toward political actors and institutions [9]. He argues, from the position of rational choice theory, that citizens will never be in an appropriate epistemological position to be confident that their relations of trust with a government are properly warranted. Given government is made up of hundreds of thousands of people and thousands of automatic systems employed by hundreds of separate agencies, he argues that it is an impossible task.

Clearly trust in Leviathan could not take the form of trust all the hundreds of thousands of employees; hence Hardin deduces that trust in government must be based, if at all, on the structure of incentives that the roles of these employees (and systems) deliver to them. Yet "few people can have an articulate understanding of the structures of various agencies and the roles within them or of the overall government to be confident of the incentives that role-holders have to be trustworthy" [9, p.30]. One might retain a confidence in the reliability of government, but reliance is not the same as trust [15].

This is surely too strong. In the first place, there are certain government actors for whom it is not unreasonable even on this account to say that (some) citizens might have trust. For instance, many voters take the trouble to watch their representatives, and sometimes other candidates, on TV, at public meetings or even door-to-door, and may make judgments about them. Well-known political figures, such

as Presidents, Prime Ministers and party leaders also come into this category.

Secondly, citizens may make inferences about government employees, many of whom may have internalised rules and values of particular organisations, and are motivated to follow them. A citizen with experience (or even just an opinion) of a government department might be able to extrapolate from that experience or opinion to the trustworthiness or otherwise of its agents.

Thirdly, institutions (such as political parties, newspapers, well-known pundits or government departments) can certify the trustworthiness of their employees, agents or other political actors. These certifications may also induce citizens to trust political actors.

Fourthly, many actors and agencies are in a position of authority with respect to a citizen. The whole question of the legitimacy of that authority, and the propensity of the citizen to resist, can easily be stated in terms of trust. That authority is something in which the citizen comes into contact on a daily basis, and so is acquainted with its vagaries.

Finally, in many cases citizens can extrapolate from attitudes of trust toward wider communities from which political institutions draw their manpower. For instance, a lack of trust of those of a public school education may lead a citizen to fail to trust the British civil service, or the Conservative Party. A trust-based preference for being governed by members of one's own ethnic community may lead a citizen to advocate a federal structure in her nation. Hence even on Hardin's view of the etiology of trust, it is not impossible that a citizen may trust in (some parts of) government or politics, and such trust or lack of it may be appropriate and warranted on many occasions.

### Three Theories of Trust

Given that (and I think it is reasonable to take the wider view that people can and do form trust judgments about government agencies and political actors very often, whether warranted or not, which strongly affect their political behaviour) it is reasonable to go on to consider what trust's role in politics might be. In this paper, I shall consider three theories that are relevant to discussions about transparency and trust.

First, there is the theory of *social capital* [16, 6], which argues that trust is an expectation which arises from honest, regular and cooperative behaviour driven by communally-shared norms. This expectation in turn drives many of the institutions of civil society. Putnam has argued both that Americans trust each other less because they have stopped bowling together [16], but also that they trust more because they pray together [17], which is perhaps an odd juxtaposition, but gives the flavour of the idea. Fukuyama argues that the spread of rights-based thinking in the US has undermined social capital by legitimising and protecting

individualist behaviour at the expense of social norms [6]. One obvious issue here is that not all trust relationships are healthy for society [2] – for instance trust within a criminal gang. The question for social capital theorists is how to ensure that trust relationships work toward the social good, and thereby to reduce the incentives for hard-done-by individuals to assert and expand their rights.

Second, there is the rational choice theory of *encapsulated trust* [10], in which the trustee acts in the trustor's interests for reasons grounded in the trustor's interests. The trustor must be sure that the trustee's interests are aligned with his. The trustee must try to align her interests with those of the trustor. This might be done through institutions or contracts, or may merely be because the trustee will suffer loss if she does not. As a matter of fact, rational choice models of trust are psychologically very implausible, but in the world of politics, a public space characterised by conflict where private reasons will not be persuasive, they have much to recommend them. An important issue for rational choice theorists is how to avoid coercion, so that the trustee's adoption of the trustor's interests is a free choice.

Third, there is the idea of deliberative democracy [8, 4], which advocates the resolution of conflict via engaged deliberation. Parties come to understand each other, and partly neutralise conflict, through discussion and debate. Trust here plays two roles [20]: (i) allowing highly politicised issues to be addressed because the parties' trust of each other means that the negotiations can be made in good faith and with confidence that concessions will be rewarded, and promises kept, and (ii) ensuring that outcomes will have limited impact, and will not result in a hegemonic grab by the victor.

### Transparency and Trust

The broad outlines of how transparency contributes to trust are probably already clear, even at the abstract level (I shall consider a detailed example below). For instance, if we begin with trust within rational choice theory, the trustee aligns her interests with those of the trustor. If the trustor is able to make an informed and accurate judgment about that alignment, then he will be able to place trust accurately. Transparency clearly has a role to play in this scenario, as it can make the trustee's interests absolutely clear [7]. The trustor is then able to check for any countervailing interests associated with the trustee, and can be more confident in his trust judgments. All things being equal, the more confident a trustor is in the trustworthiness of a trustee, the greater the risks he is prepared to take on her trustworthiness [14].

Similarly from the angle of deliberative democracy, transparency will help establish the interests of a would-be trustee, and enable a trustor to make a more accurate estimate of whether she is negotiating or debating in good faith. As Luhmann argues [12, p.55], for trust to flourish in a conflicted political situation "a minimum of real foundation is required." Transparency provides this,

enabling a complex discussion to take place in which the trustor is fully confident – “in possession of enough reality to be able usually to opt out of [it]” [12, p.56].

This also enables deliberative democratic institutions to meet Baier’s expressibility test [2, pp.123-4], which argues that trust is morally acceptable when “knowledge of what the other party is relying on for the continuance of the trust relationship” would not destabilise that relationship. One way of ensuring that a trust relationship is not coercive is to be transparent about as many relevant matters as possible (subject to the obvious caveat in the political sphere that in a negotiation, each negotiator must keep a number of her cards face down). This point also shows how transparency can add the missing ethical dimension to the neoconservative view, avoiding the unconditional valorisation of all relations of trust, and instead enabling citizens to place trust in a more informed way.

Transparency would certainly undermine many trust relationships, by making clear when the trustee’s interests were not sufficiently well-aligned with the trustor’s, or when she was not deliberating in good faith. However the trust that would be undermined would chiefly be *unwarranted* trust. The replacement of unwarranted trust by distrust would have the paradoxical effect of opening up a space for warranted, and therefore more solidly-based and accurately-placed, trust [20].

### Open Data and Trust

Drilling down more deeply, how does open data online support trust? Broadly speaking, there are three ways in which trust in politics and across society can be enhanced. Note the importance of *enhancing* rather than *increasing* trust: the point is that trust is warranted and effectively placed, not merely more prevalent.

First, transparency allows the citizen to see what the government is doing, and how it is doing it. When procurement processes occur in public, and the detail of contracts with suppliers are available, for instance, then there is far more information upon which to judge the trustworthiness of the procurement process. It is also important for citizens to be aware of what information exists that is *not* being released into the public domain (and the reasons for that).

Second, open data increases the amount of information that is available to the citizen about her own community (e.g. crime data, food inspection data or data about local businesses – [1]). This allows the citizen to be more confident about her day-to-day dealings, and be more proactive in seeking out opportunities, collaborations and interactions. Her warranted trust of her fellow community members should rise, and help increase her appetite for risk. Her unwarranted trust should decrease, reducing the risks she takes.

Third, open data increases the amount of data available for service providers, encouraging the development of innovative services for citizens (and consumers, for that matter). The result will be a wider range of services available for citizens, which, by changing the incentives for service suppliers (who, for example, can no longer preserve monopolies which serve producer interests), will make it more likely that citizens’ interests are aligned with service providers’ interests.

It should also be noted that none of these necessarily requires high take-up of open data by citizens in order to promote trust. The *possibility* of holding a government to account, for example, is the important thing, rather than there being an *actual* army of citizen auditors. Furthermore, there are often interested organisations with the relevant expertise to represent concerned groups of citizens; trust in government can therefore piggy-back on the trust relationships between citizens and interest groups under a transparency regime.

### THE UK GOVERNMENT’S TRANSPARENCY PROGRAMME

As a concrete example of a transparency/open data programme, we will consider that of the UK Conservative/Liberal Democrat Coalition government formed after the General Election of 2010. The previous (Labour) government had already set up many transparency institutions; the new government built on that beginning by expanding the transparency programme, writing it into the coalition agreement.<sup>2</sup> That agreement, which made 13 commitments to transparency, identified government accountability, cutting public spending (and reducing the government’s financial deficit), economic growth and the provision of innovative services as important drivers in this space. Open data has also been seen as part of a ‘right to data’ for citizens, from the point of view that the legitimacy (and resources) of governments to collect data stem from citizens, who are therefore entitled to access to the same data. The coalition agreement was expanded with more precise commitments set out in two letters from the Prime Minister to Cabinet Ministers on 29<sup>th</sup> May 2010<sup>3</sup> and 7<sup>th</sup> July 2011.<sup>4</sup>

The transparency programme is administered from the Cabinet Office, and is advised by a Transparency Board, made up of a number of expert advisors, and a director of transparency policy. The website [data.gov.uk](http://data.gov.uk) hosts, at the

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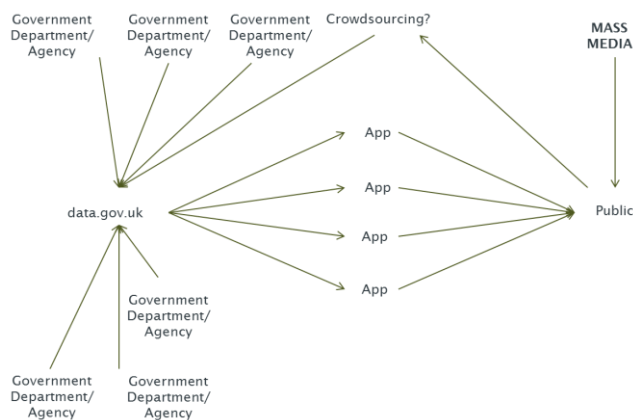
[http://www.cabinetoffice.gov.uk/sites/default/files/resource/s/coalition\\_programme\\_for\\_government.pdf](http://www.cabinetoffice.gov.uk/sites/default/files/resource/s/coalition_programme_for_government.pdf)

3 <http://www.number10.gov.uk/news/letter-to-government-departments-on-opening-up-data/>

4 <http://www.number10.gov.uk/news/letter-to-cabinet-ministers-on-transparency-and-open-data/>

time of writing, just under 8,000 datasets available for free download, without restriction (for use by UK and non-UK citizens alike). The datasets are made available on the Open Government Licence<sup>5</sup> (OGL) developed by the National Archives based on models from Creative Commons. The OGL is non-restrictive, allowing copying, publishing, distributing, adapting and commercially exploiting the data.

The aim of this programme (and the several others that are being developed in the US, the EU and elsewhere) is to produce a new set of relations characterising the infosphere. The idea is to increase the richness and diversity of the information sources available to the citizen, as Figure 1. There is obviously more complexity than appears in the figure, which has been deliberately simplified to dramatise the effect of transparency and open data on citizens' information supply.



**Figure 1: The Post Transparency Infosphere**

It is not expected that citizens will rush to download csv files or loads of RDF. Instead, the new world is characterised by a new series of information suppliers or infomediaries for citizens, who are able to mash up information from various sources (not only from government) to create applications which deliver services (either free or for payment) to citizens, and provide alternative sources of information to the mass media. It may be that government information can be improved or added to by crowdsourcing.

It should be emphasised that although a number of creative apps have been developed (see data.gov.uk for examples), the world pictured in Figure 1 remains an aspiration, and cannot be guaranteed to emerge. Much depends on the quality of the datasets being published by the government, on the appearance of an app development community, and not least on the trust that citizens have in the transparency programme itself.

## EXAMPLE: DATA ON CRIME AND CRIMINAL JUSTICE

In his letter of May 2011, the British Prime Minister set out his commitment for “crime data to be published at a level that allows the public to see what is happening on their streets from January 2011.” The result (actually launched on 1<sup>st</sup> February) was the police.uk website,<sup>6</sup> which at the time of writing has had hundreds of millions of hits. This presents the crime information on a map, but the underlying data is also separately available for app developers to reuse under the OGL. Cameron made more commitments in this sector in July 2011.

- Sentencing data by court will be published by November 2011, enabling the public to see exactly what sentences are being handed down in their local courts, and compare different courts on a wide range of measures. The data, anonymised, will include the age, gender and ethnicity of those sentenced, the sentence given, and the time taken at each stage from offence to completion of the case in court
- Data on performance of probation services and prisons including re-offending rates by offender and institution, to be published from October 2011
- From May 2012, the national crime mapping website, Police.uk, will provide the public with information on what happens next for crime occurring on their streets, i.e. police action and justice outcomes.

At the time of writing (February 2012) this work is proceeding to schedule.

In this section, I wish to discuss some of the issues that the release of this data online has raised. I do not want to get into the details of the data releases (which raise many technical issues to do with data management and representation), but will focus on processes that may impact on public trust in the crime and criminal justice system in particular, and in government in general.

## The Post-Transparency Infosphere

What does the infosphere now look like for the citizen who takes an interest in crime levels in her locale? If we ignore the raw data downloads, which only specialists will wish to see, there are now three extra levels of information and informed commentary which she will be able to look at, over and above what was available before.

First of all, there is police.uk, which is developed and run by (and for) the Home Office, and has a series of functions. Typing in one's postcode gives access to the contact details and profiles of the neighbourhood policing team, details of the next local policing meeting, messages and Tweets from the local police force, and information on crime trends in

<sup>5</sup> <http://www.nationalarchives.gov.uk/doc/open-government-licence/>

<sup>6</sup> <http://www.police.uk/>

the area. The site provides an interactive map (albeit a Google map of restricted copyright!) of the area showing the crimes that occurred during the most recent calendar month. The crimes are placed where they were located, but 'vagued up', to ensure that each point on the map covers a minimum of 8 postal addresses (to protect victims' privacy). Maps from previous calendar months can also be accessed for comparison.

Secondly, there are local websites, often created by activists, who are able to include the crime data in their reporting of local issues. An example is Kings Cross Environment,<sup>7</sup> which reports on issues around the Kings Cross area of London. Crime is not the only relevant issue, but in a busy inner city area it is clearly one important factor, and the authors of such sites are able to provide authentic, non-anecdotal detail.

Thirdly, there are specific apps available which use crime data (often mashed up with other types of data). Examples from data.gov.uk<sup>8</sup> include Postcode Research, which presents at crime rates and school quality in a particular postcode for potential property purchasers, Walkonomics, which estimates how easy it is to walk on a street, mashing up crime data with more data on pavement quality, traffic, geography (particularly on the incline of the ground), and crowdsourced reviews, and Augmented Crime Scene, which presents images of crime scenes augmented with further information about the crime. Other apps re-present the official crime statistics to the user in different ways from the police.uk site (for example, allowing rankings or comparisons).

### The Alternatives

There are, of course, alternatives to these particular points of access to crime data. The mass media remain in place, and continue to provide the bulk of access to crime information (transparency and open data are unlikely to change that in the short to medium term). There is a suspicion with some of the UK tabloid newspapers that the market imperatives to sell newspapers can affect the way that crime is presented. To express the issue baldly, if a newspaper's business model depends on fostering a fear of crime, then it is hardly incentivised to report on crime in a balanced manner. Some reports have argued that "mistrust is exacerbated by the nature of some media reporting of the statistics" [19, pp.75-77]. The small number of mass media outlets and the high barriers to entry should lead to concerns about the low level of competition between information providers, and the decontextualisation of crime reporting. The contrast with the Web is powerful, as many sites and apps integrate crime information with other information about the community to create a richer picture.

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<sup>7</sup> <http://kingscrossenvironment.com/>

<sup>8</sup> See <http://data.gov.uk/apps> for a selection.

A more liberal approach to presenting crime information has been pursued in the US, where freedom of information and free speech concerns trump privacy concerns. For instance, as a result of Megan's Law, information regarding registered sex offenders must be supplied to the public. Individual states have some discretion, but many include photographs, addresses and the nature of the crime committed. Various unofficial websites present this information on interactive maps. It has been argued that such an approach has several unintended and undesirable consequences, including sometimes the targeting of sex offenders, although physical vigilantism is rare [11]; it has also been argued that the law is ineffective in preventing crime and represents poor value for money [21]. However that may be, communitarian philosophers have argued that the privacy rights that are set aside by such laws should count for less than the health and welfare of communities [3]. It is unlikely that this type of approach will be attractive in Europe, given the difficulties of squaring it with Article 8 of the European Convention on Human Rights.

In short, it is fair to say that the position in the UK with respect to data and information on crime and criminal justice stands between the restrictive position which obtained prior to the election of the Coalition government in 2010, and the ultra-liberal position in the US. Broadly speaking, it is important to widen access to crime data for the purposes of fostering warranted trust. A report in 2010, for instance, found that trust in crime statistics is not particularly high in the UK, and that many people think that the statistics are manipulated for political reasons [19].

### Stakeholders and Issues

Fostering trust is complicated by the fact that data about crime and criminal justice are highly sought-after for a large number of reasons by a highly diverse set of constituencies. For instance, interested parties include concerned citizens, the judiciary, the police, politicians and policymakers, community leaders, community activists, offenders' organisations, victims and victim support groups, and academics studying social trends. The purposes that crime and criminal justice data can serve are also manifold: improvements in the justice system, building warranted trust in the justice system, breaking down unwarranted trust (and unwarranted mistrust), improving policing and support for the police, increasing accountability for the courts and the police, and providing data for service providers to reuse.

On the other hand, there are also legitimate concerns about data's free flow. One issue is privacy; for instance, if the location of a crime (which is included in the data) coincides with a person's address, then that person is thereby identified as the victim of the crime, and the data becomes personal data. The creation of a permanent record has caused some to worry about the possibility of reintegrating offenders into society. In British law, the 1974 Rehabilitation of Offenders Act states that an offender need not disclose relatively minor crimes in various legal

contexts after a period of time has elapsed without further offending. Concerns have also been raised about the security of witnesses and victims.

A further, rather subtle, consideration arises from Cameron's commitment to connect crime data with criminal justice data. Technically, that is very hard to do, as the information systems and ontologies used by crimefighters and the criminal justice system are extremely different (they even fall under two separate ministries, the Home Office and the Ministry of Justice respectively). This makes integration very hard. Although much of that is simply an issue of poor system design, one reason for the separation of the information system is that the various branches of the crime and criminal justice system need to keep operational independence. The police, prosecutors and courts in particular need to be prevented from colluding. So, for instance, once the police have made an arrest, their interest in the case is ended, apart from the need to present evidence to prosecutors, to the defence and in court. Their information systems therefore have no capacity to represent what happens in a crime after an arrest, and are focused on the need to supply relevant evidence. The difficulties of preventing collusion will be vastly increased if the three branches of the system use a single information system.

There are also issues about capturing important context for crime data. As one example, the reason that offender A got a more severe sentence than offender B might be quite complex and hard to represent in simple terms (for instance, on a crime map). As another example, confidence in the criminal justice system might be undermined if citizens expect the police to identify the offender for a large majority of crimes, or to prosecute a large majority of the offenders they identify. Neither of these expectations will be justified by the data, and in the second case at least there are often good public policy reasons why this does not happen.

Another policy consideration is that the publication of crime data might undermine the data itself. There are two hypothetical reasons for this. First, a crime victim might not report a crime for privacy reasons – he or she might simply not wish to see the crime appear on a publicly available map. Second, there are worries that property or insurance prices could be adversely affected if the extent of crime in that district was revealed (logically, of course, this could also lead to rises in prices in areas that had low crime), and so again victims might be reluctant to report. In either case, the crime maps would underrepresent crime. It should be emphasised that currently there is no empirical evidence that either of these two effects has occurred.

It is clear from the diversity of the stakeholder set, and the arguments for releasing and withholding the data, that the data releases are highly complex politically (as well as technically), and will impact on public trust. To that end, the next three sections will briefly consider how trust is likely to be fostered by the transparency programme from

the point of view, in turn, of the three theories of political trust set out above.

## **TRUST AND SOCIAL CAPITAL**

The key issue for social capital theorists is that trust propagates within and across civil associations and civil society independent of government. As community sites such as Kings Cross Environment show, data about communities (including but certainly not limited to crime data) can help foster meaningful relations between people sharing a real-world space. The data that enables the construction of meaningful narratives about a community plays an important role in developing trust, in three ways.

First, the narrative is an important tool in dealings with authorities. Data is vital for enabling civil associations to challenge local and national government. For example, genuine data about a rise in crime in a particular area is much more compelling than perceptions of a rise.

Second, the actions within the community also become more transparent, and the interests of actors clearer. The sponsorships of a local firm, for example, can be weighed against the services it provides for local government (and the payments it receives).

Third, the available data enables cooperation between actors, providing raw material for example for prioritisation of actions, construction of realistic goals and objective measurement of outcomes. All these make cooperation more effective.

Seen from the social capital point of view, open data and transparency provide valuable input to civil associations, and by reducing information asymmetries help them assert their interests against government, large corporations and mass media interests. Barriers to cooperation within associations are also broken down by transparency and open data.

## **TRUST AND RATIONAL CHOICE**

The impetus behind transparency has largely been on rational choice grounds, as the history described by [7] reveals, enabling potential trustors to determine the interests of would-be trustees, diminishing the role of unwarranted trust and enabling and encouraging warranted trust. To this extent, the rational choice elements of trust focus on the basic issue of trust of the government by the citizen. The focus by members of the Coalition government on accountability tends to imply the same thing. This is perhaps the most obvious application of transparency and open data.

Within the crime and criminal justice sector, one driver is accountability of the police, a long-term aim of UK policy. Trust depends on genuine accountability, and therefore avenues for citizens to effect change. In the case of the police, it is clear that more information is only part of that story; other institutions are needed, and the government is introducing directly-elected Police and Crime

Commissioners to put citizens' concerns into action.<sup>9</sup> There is some scepticism about the likely value of this move, but the point for our purposes is that trust depends on the ability to identify weaknesses and failures (which the Web can provide) *in tandem with* the ability to effect change, which requires new institutions.

### TRUST AND DELIBERATIVE DEMOCRACY

The issue for rational choice theorists is that trust requires not just information but also a measure of power. For deliberative democracy, the picture is less stark, but the role of the Web needs to be located within a subtler picture in which the ability to effect change (such as voting for Commissioners every four years) is less important than involvement and engagement. Hence as with rational choice theories, deliberative democracy depends on information freely available from the Web as a necessary, but not a sufficient, condition for generating trust. It also requires carefully-designed means by which relevant stakeholders can feed into the discussion process in order *both* to influence proceedings *and* to come to understand the concerns and constraints on other parties. In this section, I shall discuss one approach to this issue which is being pioneered in the United Kingdom.

### Transparency, Good Faith and Inclusion

The current UK transparency regime is somewhat top-down, and as I have argued elsewhere [13] needs to (and probably will) become more responsive to demand. However, the data most in demand quite often is the most sensitive data, particularly with respect to crime and criminal justice, and so screening is also important. Given the range of stakeholders in this sector, fostering trust in all relevant communities will be a complex matter. In particular, there is a danger that the debate is interpreted as a zero-sum game, where someone who wants the data is pitted directly against someone who wants to keep it concealed. Although it will sometimes come down to exactly that position, more likely there will be a nuanced compromise available (for instance, the data might be aggregated to preserve personal privacy while still allowing a rich picture of a community to be presented).

By parity of argument, trust in transparency makes similar demands to trust in politics. Or, put another way, transparency can only support warranted trust in an area of politics if the transparency programme itself is trusted. In short, if transparency is to foster trust, then the transparency programme itself should be transparent. Furthermore, it needs to be structured so that as many of the interests

highlighted above as possible are represented and able to put their case [13].

### The Transparency Sector Panel for Crime and Criminal Justice

To that end, the Home Office and the Ministry of Justice have set up a transparency sector panel which is intended to advise and challenge the strategy group of officials tasked with delivering the government's transparency commitments in the sector of crime and criminal justice. The panel is based on a model developed in [13], which is designed to broaden discussion about what it is appropriate to release. It should be noted that the transparency sector panel is not an example of government policy, and was specifically developed for the crime and criminal justice sector by the two ministries concerned.

In general, the main discussions relating to trust and transparency (e.g. about whether a data release would threaten privacy) tend to be discussed with lawyers, with an eye to remaining compliant with data protection rules. [13] argues that (a) data protection is not sufficient for preserving privacy, or public trust, or indeed the usability of data, and (b) the right discussions should be more wide-ranging, including not only lawyers but also representatives of all interested parties in the domain, those demanding the data, the data controllers (who undertake the risks of publication), domain experts (who know about the power of data in that domain, and the potential harms), and technical experts. In such a debate, the various stakeholder representatives can be seen by individual citizens as defending relevant interests, while the advisory nature of the panel means that no coterie of its members has a veto over transparency as a whole.<sup>10</sup> Examples of the issues addressed within the panel include the issue of whether to name offenders in giving out sentence data, the extremely patchy provision of information to court reporters by different courts, and the impact of the riots of Autumn 2011 across the UK on the transparency programme.

Given the transparency of the sector panel's proceedings,<sup>11</sup> the trustworthiness and good faith (or otherwise) of the deliberations is demonstrable. Furthermore, given the access that key interest groups gain to the relevant officials

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<sup>9</sup> See <http://www.homeoffice.gov.uk/publications/police/police-commissioners-protocol?view=Binary> for the protocol for this new position.

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<sup>10</sup> At the time of writing, the panel contains 4 transparency activists, an academic expert on geodata, and representatives of the Association of Chief Police Officers, the Information Commissioner's Office, Nacro (formerly the National Association for the Care and Resettlement of Offenders), Victim Support, the Victim's Commissioner, and the Office of the Senior Presiding Judge, together with relevant officials tasked with delivering transparency. The author of the present article is the current chair.

<sup>11</sup> The minutes are posted on <http://data.gov.uk/blogs/leadership>.

by this device, the transparency programme itself is more responsive to the external demand for information. Finally, it is hoped that the deliberations between participants and with the government officials will themselves foster trust across the sector, by enlarging the perspectives of participants, dispelling narratives of betrayal or bad faith, allowing apparently compromised positions to be justified, and simply by encouraging dialogue. All this is in accordance with theories connecting trust and deliberative democracy [8, 20, pp.338-340].

## DISCUSSION: TRANSPARENCY AND TRUST

The UK's transparency programme has been a central policy of the Coalition government. As discussed earlier, it has been driven by several agendas, but increasing trustworthiness and trust in government has been implicit all along. Part of the context of the programme was the disastrous expenses scandal of 2009 amongst British Parliamentarians, which diminished public trust in politics dramatically. Not only did it have that unfortunate effect, but it also tarnished the previous transparency regime based on the Freedom of Information Act 2000; the FoI request about MPs' expenses was originally made in 2005, taken up by the Information Commissioner in 2007, and only implemented in 2009. Even then, the information officially released was redacted to remove key information about second homes; it was an unofficial leak of the information by a newspaper which revealed the extent of the abuse.

It is intriguing that, depending upon one's favourite democratic theory and theory of trust, the transparency and open data programmes can support three different types of trust. Institutions such as the transparency sector panel for crime and criminal justice can help foster warranted trust among political actors and representatives of interest groups (and then secondarily to the supporters of such groups). On a social capital point of view, warranted trust is fostered among civil associations. From a rational choice point of view, citizens' trust in government can be strengthened, where it is appropriate.

Given these results, transparency and open data are important additions to the democratic toolbox. Clearly, open data worldwide is at an early stage – the transformation of the infosphere is at a very early stage, and it still remains to create the collections of infomediaries, both commercial and non-profit, that will animate the philosophy and deliver a genuinely wide range of information sources and innovative services.

The considerations above suggest lessons that can be learned for transparency and open data programmes from the point of view of fostering warranted trust. The headline message is that *publishing data is not enough*. Change at the level of institutions and processes is also required.

First of all, the publication of data on the Web affects a number of stakeholders (we saw from the crime and criminal justice example how wide a set of interests these

may be). Conflicting interests may set the tone for several technical debates about representation of data; for instance, community activists tend to want fine-grained data, while privacy activists would prefer aggregation – yet the patterns that the former are interested in might be invisible at higher levels of aggregation. Involvement of all interest groups is important at all levels of work, including technical aspects.

Second, consulting those demanding the data will ensure that the data released are those most meaningful to users. Conversely, the top down approach, where the data released is decided by central government without consultation, will tend to fail to address the concerns of users. Furthermore, from the point of view of risk management, there is an important moral hazard here. Those 'transparency tsars' pushing for data releases do not control a single byte of data, while the data controllers themselves take the risks of data releases; it is the data controller who will be hauled up before the Information Commissioner in the event of a breach of data protection law. This is one reason why the Association of Chief Police Officers, representing the Chief Constables of the UK's 43 police forces (the controllers of crime data), is represented on the sector panel for crime and criminal justice.

Third, the data released should be meaningful for communities and citizens. Big data crunchers will of course welcome the increase in available data, but on the other hand if datasets (a) are released according to an agenda set by big corporations, or (b) are tailored to their needs rather than those of citizens (for example, if personal data is routinely shared with corporations without meaningful consent given by data subjects, especially in sensitive sectors such as health or education), it will quickly become clear to citizens that it is they who are becoming transparent, not the government. Similarly, the OGL and sites such as data.gov.uk should be central for the delivery architecture, rather than charging fees or granting exclusive licences, which will raise rather than lower the barriers to entry.

Fourth, all theories of political trust require the dismantling of information *asymmetries*. In particular, Schoeman has argued that civil associations require privacy in order to function [18]. It follows that information about government function needs to be released, and citizens' privacy needs to be treated with great respect. Of course there are situations where knowing how government has functioned involves knowing about individuals (for example the quality of a school is defined by the performance of its pupils). In such cases, there are complex issues to be negotiated [13]. It is essential to do this in good faith.

Fifth, in order for citizens to judge that debate is carried out in good faith, it is important for the transparency process itself to be transparent [13]. It is important to know which datasets have been selected for publication and which not, and in the latter case why not.

Finally, the arguments in this paper have been largely theoretical, as have the political and the economic arguments for transparency and open data as a whole. Empirical data are needed, about citizens' trust of such programmes, about the economic benefits and costs, and also about related matters (such as the effect of publishing crime data on property prices). Empirical investigation will enable a more finely-attuned set of transparency policies and information releases to be developed.

As noted, these are important *for fostering warranted trust*; they will not necessarily help with respect to other drivers, such as growth or cost-cutting. But as a final lesson, it is worth pointing out that the legitimacy of any transparency programme depends on public trust [13]. In that sense, trust underpins any other purpose to which transparency may be put. From that point of view, the lessons listed above are fundamental.

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#### REFERENCES

- Alani, H., Dupplaw, D., Sheridan, J., O'Hara, K., Darlington, J., Shadbolt, N. and Tullo, C. Unlocking the potential of public sector information with Semantic Web technology. *Proceedings of the 6<sup>th</sup> International Semantic Web Conference*, Springer-Verlag.
- Baier, A.C. Trust and antitrust. In *Moral Prejudices: Essays on Ethics*, Harvard University Press, Cambridge MA (1994), 95-129.
- Etzioni, A. *The Limits of Privacy*. Basic Books, New York, 1999.
- Fishkin, J.S. *When the People Speak: Deliberative Democracy and Public Consultation*, Oxford University Press, Oxford, 2009.
- Floridi, L. *Information: A Very Short Introduction*, Oxford University Press, Oxford, 2010.
- Fukuyama, F. *Trust: The Social Virtues and the Creation of Prosperity*. Basic Books, New York, 1995.
- Fung, A., Graham, M. and Weil, D. *Full Disclosure: The Perils and Promise of Transparency*. Cambridge University Press, New York, 2007.
- Habermas, J. *Between Facts and Norms: Contributions to a Discourse Theory of Law and Democracy*. M.I.T. Press, Cambridge, MA, 1996.
- Hardin, R. Do we want trust in government? In Warren, M.E. ed., *Democracy and Trust*, Cambridge University Press, Cambridge (1999), 22-41.
- Hardin, R. *Trust*. Polity Press, Cambridge, 2006.
- Levenson, J.S. and Cotter, L.P. The effect of Megan's Law on sex offender reintegration. *Journal of Contemporary Criminal Justice* 21, 1 (2005), 49-66.
- Luhmann, N. *Trust and Power*. Wiley, New York, 1979.
- O'Hara, K. Transparent Government, Not Transparent Citizens. Independent report for the UK Cabinet Office (2011), <http://www.cabinetoffice.gov.uk/resource-library/independent-transparency-and-privacy-review>.
- O'Hara, K., A General Definition of Trust (2012), <http://eprints.ecs.soton.ac.uk/23193/>.
- Pettit, P. Trust, reliance and the Internet. *Analyse & Kritik* 26 (2004), 108-121.
- Putnam, R.D. *Bowling Alone: The Collapse and Revival of American Community*. Simon & Schuster, New York, 2000.
- Putnam, R.D. and Campbell, D.E. *American Grace: How Religion Divides and Unites Us*. Simon & Schuster, New York, 2010.
- Schoeman, F.D. *Privacy and Social Freedom*. Cambridge University Press, Cambridge, 1992.
- U.K. Statistics Authority, *Overcoming Barriers to Trust in Crime Statistics: England and Wales* (2010), <http://www.statisticsauthority.gov.uk/reports---correspondence/reports/overcoming-barriers-to-trust-in-crime-statistics--england-and-wales.pdf>.
- Warren, M.E. Democratic theory and trust. In Warren, M.E. ed., *Democracy and Trust*, Cambridge University Press, Cambridge (1999), 310-345.
- Zgoba, K., Witt, P., Dalessandro, M. and Veysey, B. Megan's Law: assessing the practical and monetary efficacy. *National Criminal Justice Reference Service* (2008), <https://www.ncjrs.gov/App/Publications/abstract.aspx?ID=247350>.